AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for preparing ~~a soft~~ an electroplated soft magnetic thin film of a ~~cobalt and iron based~~ cobalt-iron alloy which consists essentially of 30 to 50 at% of cobalt and 50 to 70 at% of iron and has a saturation flex density of at least 2.3 T, comprising the steps of:

furnishing a plating tank including a cathode compartment and an anode compartment which are separated by a diaphragm or salt bridge so as to permit charge transfer, but inhibit penetration of iron ions, the cathode compartment receiving a plating solution containing cobalt ions and divalent iron ions, and the anode compartment receiving an electrolyte solution,

immersing a work piece in the plating solution,

immersing an anode in the electrolyte solution,

effecting electroplating by conducting pulse current with a pulse current density of 75 to 300 mA/cm^2 to form a film on the work piece, and

heat treating the film at a temperature of 100 to 550°C.

2. (Currently Amended) A method for preparing ~~a soft~~ an electroplated soft magnetic thin film of a ~~cobalt and iron based~~ cobalt-iron alloy which consists essentially of 30 to 50 at% of

cobalt and 50 to 70 at% of iron and has a saturation flex density of at least 2.3 T, comprising the steps of:

immersing a work piece and a soluble anode in a plating solution containing cobalt ions and divalent iron ions,

effecting electroplating by conducting pulse current with a pulse current density of 75 to 300 mA/cm^2 to form a film on the work piece, and

heat treating the film at a temperature of 100 to 550°C.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (New) The method of claim 1 wherein the cobalt-iron alloy consists essentially of 32 to 41 at% of cobalt and 59 to 68 at% of iron.

8. (New) The method of claim 1 wherein the saturation flex density is at least 2.35 T.

9. (New) The method of claim 1 wherein the saturation flex density is about 2.4 T.

10. (New) The method of claim 1 wherein the pulse current density is 100 to 300 mA/cm^2.

11. (New) The method of claim 2 wherein the cobalt-iron alloy consists essentially of 32 to 41 at% of cobalt and 59 to 68 at% of iron.

12. (New) The method of claim 2 wherein the saturation flex density is at least 2.35 T.

13. (New) The method of claim 2 wherein the saturation flex density is about 2.4 T.

14. (New) The method of claim 2 wherein the pulse current density is 100 to 300 mA/cm^2.

15. (New) The method of claim 1 wherein the plating solution contains cobalt ions in a concentration of 0.01 to 1.5 mol/dm^3.

16. (New) The method of claim 1 wherein the plating solution contains iron ions in a concentration of 0.01 to 1.5 mol/dm^3.

17. (New) The method of claim 1 wherein the total concentration of metal ions in the plating solution is in a range of 0.02 to 3.0 mol/dm^3.

18. (New) The method of claim 1 wherein the plating solution is free of sulfur compounds.

19. (New) The method of claim 1 wherein the plating solution has a pH of 1 to 6.

20. (New) The method of claim 1 wherein the electroplating is conducted with a cathode current density in the range of 3 to 30 mA/cm^2.

21. (New) The method of claim 1 wherein the electroplating is conducted while the plating solution is quantitatively agitated by means of a rotating disk electrode.

22. (New) The method of claim 1 wherein the heat treating is conducted in an magnetic field.

23. (New) The method of claim 1 wherein the heat treating is conducted in an magnetic field of 20 to 500 Oe.